

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

**Claims 1-77 (Cancelled)**

**Claim 78 (Currently Amended):** An apparatus for providing an *in vivo* assessment of loads on adjacent bones, said apparatus comprising:

a body for insertion between the adjacent bones;

a first sensor assembly located within said body, said first sensor assembly generating an output signal in response to and indicative of a load being applied to said body through the adjacent bones; and

at least one telemetric device, remote from said ~~first sensor assembly~~ body, said at least one telemetric device being operable to receive said output signal from said first sensor assembly and to transmit an EMF signal dependent upon said output signal.

**Claim 79 (Previously Presented):** The apparatus of claim 78 wherein said first sensor assembly comprises a pressure sensor.

**Claim 80 (Previously Presented):** The apparatus of claim 78 further comprising a second sensor assembly located within said body, said at least one telemetric device being located at said second sensor assembly.

**Claim 81 (Previously Presented):** The apparatus of claim 80 wherein said second sensor assembly is operatively connected to said first sensor via a tube.

**Claim 82 (Previously Presented):** The apparatus of claim 80 wherein said first sensor assembly is maintained in physical communication with an interior surface of said body.

**Claim 83 (Previously Presented):** The apparatus of claim 78 further comprising an implant associated with the adjacent bones, said implant being external to said body.

**Claim 84 (Previously Presented):** The apparatus of claim 83 wherein said implant is connected to the adjacent bones to stabilize the adjacent bones.

**Claim 85 (Previously Presented):** The apparatus of claim 83 further comprising at least one strain gauge mounted on said implant, said at least one strain gauge for generating a second output signal in response to a load being applied to said implant, said at least one strain gauge being electrically connected with said at least one telemetric device.

**Claim 86 (Previously Presented):** The apparatus of claim 83 wherein said at least one telemetric device is located on said implant.

**Claim 87 (Previously Presented):** The apparatus of claim 86 wherein said at least one telemetric device is operatively connected to said first sensor via a tube such that said first sensor assembly is positioned inside a first end of said tube and a second end of said tube is attached to said implant.

**Claim 88 (Previously Presented):** The apparatus of claim 87 wherein said tube is packaged with a biomolecular coating such that said tube is covered with a monolayer coating of a desired biomolecule.

**Claim 89 (Previously Presented):** The apparatus of claim 88 wherein said the desired biomolecule comprises one of collagen and hyaluronan.

**Claim 90 (Previously Presented):** The apparatus of claim 78 wherein said body comprises a prosthetic device for preserving motion between the adjacent bones.